

Appl. No. 10/552,134  
Amdt. Dated March 28, 2007  
Reply to Office action of December 22, 2006

**REMARKS/ARGUMENTS**

Claims 1-15 were pending in the instant application. Claim 14 has been amended to more particularly point out and distinctly claim that which Applicants consider to be their invention.

Upon entry of the above-made amendments claims 1-15 will be pending in the current application. The amended claim 14 is fully supported in the specification as originally filed. Therefore, the amendments to the claims do not add new matter. Applicants respectfully request that the amendments be entered.

The following remarks, in conjunction with the above amendments, are believed to be fully responsive to the Office Action.

**THE REJECTIONS UNDER 35 U.S.C. § 112, SECOND PARAGRAPH**

**SHOULD BE WITHDRAWN**

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention. In particular, the Examiner objected to the term “strong anion exchanger”. In response, Applicants have amended claim 14 to recite an ion exchanger is “an anion exchanger comprising quaternary amine functional groups, or the ion exchanger is a anion exchange resin based on polystyrene-divinylbenzene”.

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Therefore, Applicants respectfully request that the rejections of the 35 U.S.C. 112, second paragraph, of claim 14 be withdrawn.

**THE REJECTIONS UNDER 35 U.S.C. § 103**

**SHOULD BE WITHDRAWN**

Claims 1-15 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Griffiths et al., WO03/059397 (“Griffiths”) in view of Gustavson et al., US 5,607,659 (“Gustavson”) and Yngve, Int. Diss. Abs. 2001, 62, abstract (“Yngve”). In response, Applicants submit that each of the rejections should be withdrawn for the reasons stated below.

Griffiths discloses a radiolabelling method for the preparation of a NOTA or DOTA labeled  $^{68}\text{Ga}$  for use in PET. It does not disclose or teach the synthesis of  $^{68}\text{Ga}$ -DOTA-peptide complex by microwave activation.

Gustavson discloses conjugates of DBM with one or more molecules chelated to  $^{68}\text{Ga}$ . Again, it fails to disclose or teach the synthesis of  $^{68}\text{Ga}$ -DOTA-peptide complex by microwave activation.

In Yngve, it discloses using microwave heating to carry out the conjugation reaction (coupling of a prosthetic group to a macromolecule). Applicants respectfully submit that in

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the Office Action three different classes of chemical reactions having different driving forces and mechanisms were mixed up:

1. Halogenation chemistry(halogenation is a chemical reaction that replaces a hydrogen atom (F, Cl, Br, I) with a halogen atom.)
2. Coordination chemistry (The chemistry of complex compounds made up of a metal ion and surrounded by ligands, e.g. Ga)
3. Bioconjugate chemistry (Bioconjugation involves the linking of two or more molecules, with a release of a small molecule like water, to form a novel molecule having the combined properties of its individual components.)

Dr. Yngve in her dissertation used microwave heating to carry out the conjugation reaction (coupling of a prosthetic group to a macromolecule) which does not involve  $^{76}\text{Br}$ . She did not use the microwave heating to carry out the coordination chemistry (complexation of gallium by chelates). She did not even use it for the halogenation chemistry where the  $^{76}\text{Br}$  itself was involved in the reaction (oxidative bromination).

The fact that Yngve herself did not use the microwave heating when conducting her coordination chemistry using gallium is a very clear telling point that the usage of the microwave technique for that class of chemical reactions was absolutely not obvious. Thus, Applicants respectfully submit that there is absolutely no teaching or suggestion in Yngve to apply microwave activation in Ga coordination chemistry.

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It is therefore respectfully submitted that 35 U.S.C. 103 rejections of claims 1-15 over Griffiths in view of Gustavson and Yngve be withdrawn.

### **DOUBLE PATENTING**

Claims 1, 3-7 and 15 are provisionally rejected under 35 USC 101 as claiming the same invention as that of claims 8-14 of copending Application No. 10/552,206. In addition, claims 1, 3-6 and 9-14 are provisionally rejected under 35 USC 101 as claiming the same invention as that of claims 1-4, 8-13 of copending Application No. 11/358,681. In response, Applicants submit that claims directed to the same invention, if any, will be cancelled if and when the copending claims are granted.

Claims 1-15 are provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 1, 2, 8-15, 18 and 19 of copending Application No. 10/552,206. In response, Applicants submits that a terminal disclaimer will be filed if and when the copending claims are granted.

### **CONCLUSION**

In view of the amendments and remarks herein, applicants believe that each ground for rejection or objection made in the instant application has been successfully overcome or obviated, and that all the pending claims are in condition for allowance. Withdrawal of the Examiner's rejections and objections, and allowance of the current application are respectfully requested.

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The Examiner is invited to telephone the undersigned in order to resolve any issues that might arise and to promote the efficient examination of the current application.

Respectfully submitted,

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